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10/820,436	04/06/2004	Robert Gordon Dyke	N2001-700010	7166
37462 7590 12/10/2007 LOWRIE, LANDO & ANASTASI RIVERFRONT OFFICE ONE MAIN STREET, ELEVENTH FLOOR CAMBRIDGE, MA 02142				
EXAMINER				
ROOT, ROBERT M				
ART UNIT		PAPER NUMBER		
4183				
NOTIFICATION DATE		DELIVERY MODE		
12/10/2007		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/820,436

Applicant(s)

DYKE, ROBERT GORDON

Examiner

Robert Root

Art Unit

4183

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-27 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 06 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-893)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date 6-20-2005

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 1 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. The listed claim's preamble begins being presented as a system claim. Then, it starts being presented as method claims. Ensuing dependent claims are presented as method claims. The bodies of these listed claims fully and intrinsically set forth all of the limitations of the claimed invention, and the preambles merely state dual intended use of the invention's limitations, which makes the preamble considered not a limitation and is of no significance to claim construction. Examiner will prosecute the claims as method claims.

4. Claim 22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Claim 22 uses the acronym TDM, which isn't defined in the claim. Appropriate action is required by applicant.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-5, 7-13, and 16-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Algic (US 7,283,551).
8. Algic discloses a method comprising the distribution of time division multiplexed (TDM) data, the method comprising the acts of receiving, from a node (broadly interpreted to include at least one TDM source), timeslot (broadly interpreted to include timeslot) associated with a TDM communication; inserting the received timeslot control information into a packet; transmitting the packet to a destination capable of recovering the timeslot control information from the transmitted packet; an act of receiving the packet, and forwarding the timeslot control information to a node (broadly interpreted to include TDM destination), wherein the node (broadly interpreted to include TDM source) and TDM destination are located on at least one circuit (broadly interpreted to include circuit board) within a communication system; TDM source is a TDM SONET (broadly interpreted to include bus), and wherein the act of receiving further comprises receiving the timeslot control information from the TDM SONET; the act of transmitting the packet further comprises an act of transmitting the packet to the destination over a packet-based network; the packet-based network includes an Ethernet network; the shared media network includes at least one Ethernet switch (broadly interpreted to include packet switch), and wherein the act of transmitting further comprises an act of forwarding the packet by the at least one Ethernet switch toward the destination; the act of forwarding includes an act of determining where to forward the

Art Unit: 4183

packet based on Ethernet MAC source/destination (broadly interpreted to include header) information; the Ethernet includes a point-to-point connection between an entity associated with the TDM source and an entity associated with the TDM destination, and wherein the act of transmitting further comprises an act of transmitting the packet over the point-to-point connection; the TDM SONET has an associated TDM frame period, and wherein a transmission timer value may represent a time period for running the TDM Burst MAC plus an additional guard band time (broadly interpreted to include latency associated with transmitting the packet is less than a TDM frame period); an act of receiving the packet at the destination, wherein the act of receiving does not include the use of a jitter buffer at the destination; the act of inserting the received timeslot control information into a packet, includes an act of inserting timeslot control information into the multicast timeslot signal (broadly interpreted to include payload section of the packet); the act of transmitting further comprises an act of transmitting the packet in accordance with received timeslot control information (broadly interpreted to include in order compared to one or more other packets having one or more time slots) from the TDM source; transmitting the packet further comprises an act of transmitting the packet to the destination over Ethernet, and wherein the act of transmitting the packet further comprises transferring the packet and the one or more other packets to the destination in accordance with the received timeslot control information; the act of transmitting the packet further comprises an act of transmitting the packet to the destination over Ethernet to another data communication system associated with the destination; an act of indicating, to the destination, when data in the timeslot control information has changed; providing a synchronization signal to the TDM source and to

Art Unit: 4183

the TDM destination; and the act of providing the synchronization signal includes an act of providing the synchronization signal via a different link (broadly interpreted to include a network separate from a network over which the packet is transmitted) (Abstract; Figures 1 - 4, 6 - 8, 11, 12, 14; Column 1, Lines 27-41; Column 2, Lines 33-63; Column 4, Line 36 - Column 6, Line 62; Column 8, Line 32 - Column 9, Line 21; Column 12, Line 25 - Column 13, Line 43; Column 14, Lines 31-49).

9. Claims 22 - 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Algie (US 7,283,551).

10. Algie discloses a system for communicating TDM data comprising a first node (broadly interpreted to include first TDM communication entity) that is adopted to receive timeslot control information (broadly interpreted to include at least one timeslot) associated with a TDM connection; a second node (broadly interpreted to include second TDM communication entity) coupled to the first node through an Ethernet (broadly interpreted to include packet-based) network, wherein the first node is adapted to transmit a packet to the second node through the Ethernet network, the packet including the timeslot control information; at least one packet switch that couples the first node to the second node, and wherein the at least one packet switch is adapted to forward the packet to the second node; a timeslot control signal scheduler (broadly interpreted to include synchronizer) coupled to the first node and the second node, the timeslot control signal scheduler providing a synchronization signal to the first node and the second node; the timeslot control signal scheduler is coupled to the first node and the second node separately from the Ethernet network; the timeslot control signal scheduler provides the synchronization signal to the first node and the second node over at least

Art Unit: 4183

one connection, the at least one connection being separate from the Ethernet network; and load-shared functionality may enable shared timeslots on a first link (broadly interpreted to include first TDM communication entity) and a second link (broadly interpreted to include second TDM communication) to use dedicated timeslots thereby providing improved jitter performance for dedicated timeslot services by reducing the cycle time (broadly interpreted to include latency associated with transmitting the packet is less than a TDM frame period), and wherein the second node does not implement a jitter buffer to receive one or more packets (Abstract; Figures 2 - 4, 12; Column 6, Lines 34-41; Column 12, Line 25 - Column 13, Line 43).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 6, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Algie (US 7,283,551) in view of Baydar et al (US 6,333,940).

Art Unit: 4183

13. In addition to disclosing the elements of Claims 1-5, 7-13, and 16-21 above, Algic discloses

- transmission of timeslot control information (broadly interpreted to include timeslot) over a packet-based network (broadly interpreted to include Ethernet) (Column 12, Lines 25-47).

14. Algic fails to disclose the packet-based network transmits timeslot data over a full-duplex connection; the act of transmitting further comprises an act of transmitting, in parallel, the packet to the destination over a plurality of redundant connections; and the act of transmitting the packet includes transmitting the packet substantially simultaneously over the plurality of redundant connections.

15. Baydar discloses in the same field of endeavor a method for distributing data, the method comprising:

- timeslot assignment and signaling data (broadly interpreted to include timeslot data) is sent over a full-duplex connection;
- the act of transmitting comprises an act of transmitting, in parallel, the data (broadly interpreted to include packets) to the destination over a plurality of redundant connections; and
- the act of transmitting the data concurrently over the plurality of redundant connections

(Column 29, Lines 17-37; Column 31, Line 37 - Column 33, Line 9; Column 40, Lines 51-63; Column 46, Lines 56-67).

16. Baydar discloses these differences for the purpose of creating a method of mapping and demapping signals between virtual tributaries (VT) and digital signals and to a circuit for performing the VT mapping functions.
17. Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to take the method described by Algic and add to it the method described by Baydar to create a method in a data communication system for distributing time division multiplexed (TDM) data comprising creating and deleting signals between networked nodes and digital signals and to a circuit for performing virtual tributary functions to provide interface with equipment capable of terminating a variety of different feeders.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT ROOT whose telephone number is (571)270-1960. The examiner can normally be reached on Monday to Thursday from 7:30am to 5:00pm Eastern.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on 571-272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4183

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Root/
Examiner, Art Unit 4183

/Len Tran/
Supervisory Patent Examiner, Art Unit 4183